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 IDENTIFIERS *INVEST Computer Assisted Learning System

ABSTRACT

The INVEST learning system is a computer-based program offering developmental courses in reading, mathematics, writing, life skills, and learning skills. As part of a joint project sponsored by the League for Innovation in the Community College (LICC), the American College Testing Program, and the INVEST Corporation, California's San Diego Miramar Community College undertook a project to evaluate the instructional benefits of the INVEST Software for developmental education students and develop a profile of best practices. Data sources included institutional profiles and interim narratives from 11 postsecondary educational institutions implementing the software; results from pre- and post-tests; and surveys of students, laboratory supervisors, and faculty involved in using or implementing the software. Results from surveys indicated that faculty thought that the software addressed more than 60% of developmental education learning objectives and more than 40% of the objectives at their college, that lab supervisors gave high ratings to INVEST's service department and reporting system, and that 75% of the students both felt more comfortable with computers after 2 weeks of the course and would take courses using INVEST again. A compilation of best practices from participating institutions is included. Appendixes provide a chart of the INVEST curriculum model and information on the system's features and benefits, information on the LICC project to implement INVEST, and INVEST and LICC articles describing program outcomes at participating colleges. (TGI)

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San Diego Miramar Community College
INVEST Learning Corporation
League for Innovation in the Community College
American College Testing

**ACADEMIC CAREER SUCCESS:
INSTRUCTIONAL TECHNOLOGY
FOR THE AT-RISK STUDENT**

Presented to:

**California Community College
1996 Chancellor's Conference**

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“As business and technology become internationalized, people are also becoming internationalized. Increasingly we meet people who have lived in several countries, speak several languages, and work for a company in one country, selling in a second country a product assembled in a third country with materials from a fourth. Technology and innovation make this possible. Our skills in this area will make the difference in competing in the workplace. Knowledge and expertise are the currency of the future.”

Mary L. Walshok
Blue Collar Women

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El Paso College, TX
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Project Goals

Two Year Research Study

- *Determine the benefits of INVEST Software for developmental education students.
- *Determine the most efficacious instructional models among those used at the various demonstration sites.
- *Recommend modifications or improvements for developmental education students.

Data Resources

- *Institutional Profiles
- *Interim Narrative Reports
- *College Student Demographic Report
- *INVEST Management System Data Reports
- *ACT COMPASS Data Reports
- *Student, Lab Director, and Faculty Surveys

Research Progress Format

- *ACT COMPASS Pre-tests
- *Orientation Time-Students Surveys
- *Prescription and Assignment
- *Learning Plan Benchmarks
- *Feedback Factors (Lab Coordinators and Instructor Surveys)
- *Student Exit Surveys
- *ACT COMPASS Post-testing

Feedback & Observations

Faculty

- *Faculty believe the "potential exists" to use INVEST for up to 80% of the student contact hours.
- *Faculty surveys indicate INVEST Software addresses more than 60% of the learning objectives in developmental education.
- *Faculty confirm INVEST Software addresses more than 40% of learning objectives in their college curriculum.

Lab Supervisors & Lab Directors

- *Rated INVEST Learning's Service Department as instrumental and a key component to their program success.
- *Rated the INVEST Management System and Reporting System as "functional, comprehensive, easy to navigate."

Student Satisfaction Indicators

- *Within two weeks 75% of students using INVEST Software felt "more comfortable" with computers at the end of the semester.
- *Students felt INVEST software made the course work "easier."
- *75% of students surveyed would take a course using the INVEST software system again.

Midterm Report of INVEST Class
October 1994

Introduction

The 28 students enrolled in College Prep English (ENC 0010-005) meet three times a week (Monday, Wednesday, and Friday) for 50 minute classes. The students have been placed into this course on the basis of their College Placement Test (CPT) scores or MAPS scores, the scores being below what the College requires for placement into college credit level courses. The purpose of the College Prep English program is to advance the students' writing skills to the level appropriate for success in college credit courses. The goal, therefore, is more to advance appropriate and relevant writing skills than to remediate poor ones.

Instructional Approach

College level writing skills include those skills required to write and edit texts written for a variety of purposes (e.g., to inform or persuade through describing, narrating, illustrating, analyzing, etc.) and to a variety of audiences including instructors, classmates, and professionals in specific academic and applied fields. The skills deemed appropriate for college level writing include the following:

- recognizing sentences written according to the rules of Standard Edited English
- composing sentences written according to the rules of Standard Edited English
- editing sentences to detect errors which interfere with reading and comprehending the writer's meaning
- using language appropriate to specific contexts and writing purposes
- composing topical paragraphs which use rhetorical methods to suit the writer's purpose
- editing topical paragraphs to identify and correct faults which interfere with the text's unity, coherence, and development
- use other writing as evidence to support an idea or position (i.e., summarizing, paraphrasing, quoting, and documenting sources)

The texts for the course, Writer's Workplace with Readings (Scarry and Scarry) and A Pocket Style Manual (Hacker) are the primary instructional media. Homework from the Writer's Workplace is assigned weekly and discussed in class. Additionally, instruction includes writing demonstrations either from the instructor or from selected students in the class. Writing projects are assigned, both in-class and out, to be completed individually or by a group. Students learn to write and edit using a word processing program on the computers in the College's labs.

FINAL REPORT
INVEST PROJECT—FALL, 1994

COLLEGE PREPARATORY MATHEMATICS (MAT 0002/005)
INSTRUCTOR—Dr. June B. Jones

GENERAL OUTLINE OF COURSE

The purpose of the College Preparatory Mathematics course (MAT 0002) is to teach the basic arithmetic, geometry, and pre-algebra skills that the student needs to be successful in MAT 0024 (College Preparatory Algebra). As a result of participation in this course, the student will be able to (1) add, subtract, multiply, and divide whole numbers, integers, fractions, and decimals, (2) solve problems requiring proportions, percents, and the English and metric systems of measurement, and (3) calculate perimeter, area, and volume of geometric figures.

Although the primary delivery method of course content was through lecture, a variety of instructional and assessment techniques were integrated into the course. Students enrolled in college preparatory mathematics were required to enroll in a one hour laboratory. (The MAT 0002 course is a 4 credit hour course.)

LABORATORY REQUIREMENTS

The INVEST computer lab/facility is equipped with 20 computer stations. Student enrollment for this course was 41. Therefore, during the laboratory period students were placed in two groups. The groups alternated weeks to work on computer assignments. The facility also has several sets of tables for student use. When off-line, the students worked on C.L.A.S.T. arithmetic skills. Assignments were selected from the text C.L.A.S.T. Study Guide for Mathematics by Joan Goliday. In addition to the structured lab hour, students were instructed to spend an additional hour per week in the INVEST laboratory.

USE OF INVEST SOFTWARE

MAT 0002 section 005 had 41 students enrolled. These students were scheduled to use the INVEST software two hours per week. One hour was structured with the instructor present and available for assistance. The lab supervisor generated two reports bi-weekly for the instructor: Student Time in Lab and Lesson Progress Report. One hour was completed by the student at his convenience and a lab assistant was available to answer technical questions.

BEST PRACTICES OF INVEST LEARNING PROJECT LEAP
Lab Supervisor's & Faculty Reports - Spring '95
Software Implementation & Integration Practices

In peer tutor discussions students were often challenged on different levels to justify their responses to particular questions on the INVEST software, thus forcing the student to focus on the strategies employed to answer questions. Additionally, students were asked to predict outcomes and make inferences which are higher level thinking skills and help students distinguish between relevant and irrelevant information. (CFCC)

Usually feedback from the (INVEST) corrective help screen provided opportunity for the students to analyze their errors (a critical component of reading improvement) (CFCC)

The students were also required to put in a minimum of one hour per week outside of regular class time working on INVEST software. (CFCC)

Most of the students in my INVEST class have responded favorably to working in the lab and maintain journals as active reports of studying skills in the lab which reinforced subject matter in the text relating to the author's purpose. (CFCC)

One procedure that has worked well this semester is requiring all my students to work mainly in the Critical Reading section; it challenged them to work with passages in which the skills are pulled together in a realistic presentation. (CFCC)

The INVEST computer lab/facility is equipped with 20 computer stations. Student enrollment for this course was 40. When off-line, the students worked on handouts/worksheets developed by the instructor. (CFCC)

I selected lessons from the following topics: Numeration, Fractions, Decimals, Measurement, and Geometry. Students were allowed to take the lesson placement tests to try to comp our of lessons. So, some individualization was still possible. (CFCC)

My intentions this term were to hold class in the INVEST lab setting one a week during the time I had allotted in my course schedule for grammar review and instruction. (CFCC)

The strongest emphasis of this course is literal comprehension and vocabulary development, followed closely by critical comprehension. The INVEST lessons cover these primary emphases. We have not tried to specifically coordinate each day's lab activity with the current lesson. Thus, the classroom lesson is sometimes an after-the-fact review of the INVEST lesson, and vice-versa. Given the tendency of some students to dismiss a topic once it has been covered, perhaps there is some value in the random rather than calculated reinforcement of the lesson. (CFCC)

The INVEST reading workbooks are an appropriate tool to start students who have been out of school for many years. They (students) can start right in at a non-threatening level and work without help in the very beginning. This gives them enough confidence to return the next day. (CCCD)

Over the years a writing packet has been developed in the TEC system. Usually half this time is spent with this packet. In addition, the INVEST writing processor is used about five hours a week and supplementary material on writing is used the remaining time. (CCCD)

The greatest strength of the software was the capability to keep a record of the students time on task and progress through the assigned materials. I believe the relative ease of using the software was also an advantage. (CCC)

The more success a student is able to experience, the more confident the student feels about math. (CCC)

With our increasingly "busy, in-a-hurry" students, I believe the use of the technology and computer software such as INVEST will be an aid to a self-paced course. Currently, it is time that is the variable in education rather than mastery being the variable. With mastery the variable, ALL students will master the necessary material at a determined level - some in two weeks, some in two months - as opposed to all student mastering some of the material in a determined time. I believe the INVEST facility can best be used to make mastery for all students the goal. (CCC)

INVEST lessons provide significant reinforcement of essential grammar/mechanics work. INVEST activities constitute a grammar/mechanics review for all students. (EC)

INVEST's greatest advantage is that it requires the student to engage the subject. . . INVEST compels students to actively participate; such active participation is critical for student success but too often not there with conventional instruction. (EC)

With regard to discipline-specific success, INVEST does, I think, help students acquire and reinforce some basic language skills, and this is especially true with lower level students. In general, INVEST does, I think, play a significant part in student success. (EC)

The greatest strength of the Sensei-Algebra software is its visual and kinesthetic features. Because the concepts are reinforced in such a dynamic way, the software serves as a powerful supplement to classroom presentations. (EC)

As part of the research project, the students are required to complete weekly lab assignments in the INVEST lab outside of regular class time. These assignments have been derived from the "Sensei-Algebra" portion of the INVEST software. (EC)

To accommodate student accountability of smaller portions of chapters, we have developed several assignment pages for chosen topics. (EC)

The INVEST software has allowed me to vary the classroom format and to consult with students on an individual basis. The management feature of the software monitors student participation in the lab. Furthermore, the INVEST software fosters computer literacy in a student population which is generally unfamiliar with computer technology, especially that of handling a mouse and using a keyboard. (EC)

A major strength of the INVEST software, in my opinion, is that it affords the student plenty of added opportunity to practice the grammar skills covered in the class and in the text, in a different medium while providing the student with immediate feedback. (EC)

Students in the first level developmental writing classes usually need a lot more grammar practice than we can provide in class, and the INVEST program affords them with the opportunity to get the practice and feedback. (EC)

The lab support is perfectly adequate for our needs. I plan to work more with the writing components and possibly use the writing workbooks as well. (EPCC)

INVEST curriculum strengths: (RICH)

1. The majority of the passages are interesting.
2. The TASP (CCB) component parallels the sequence of skills as we teach them.
3. Quick access directly into the program.
4. Students have to stay on designated task - they can't accidentally get "off track".
5. The instructor can look at each student's work and determine exactly what they've done and how well they've done.
6. Students know immediately after each lesson what their score is.
7. Good graphics and high interest to the text.
8. INVEST offers large choice of answers which cause students to have to think.
9. Complicated, but possible, access to previous screens of the text.
10. Use of the mouse adds interest and speed - it forces students to become familiar with its use (this develops a necessary computer skill).

We have found that ABE students have been successful learning math at their own pace through INVEST and informal multi-level ABE math classes, so we wanted to try to offer self-paced credit math classes on INVEST. INVEST is useful to self-paced students in a number of ways: (SF)

*placement and superlative score branching allow students to work quickly through the objectives they already know, while spending more time and getting more practice on the objectives that give them trouble. (SF)

*the management system gives the instructor detailed information on students' progress and on the areas where they need intervention. (SF)

*the lab can serve as a focal point for instruction and, combined with the availability of the instructor and drop-in tutors, it can provide students with scheduling options. (SF)

Sensei Algebra would also be better used as a group activity in a classroom, and I'd like to do more of that in the fall semester. (SF)

The Veteran's Upward Bound Program provides veterans with access to INVEST lessons before they take the College's Placement Test. This is probably one of the best uses of INVEST software. (CCC)

Our program with State of Ohio employees has been successful. The majority of the sixty-four employees have signed up for a second session in order to complete their goals. There is a waiting list for the sessions. (CCC)

Just as we have done the past two semesters, we plan to tie lab work for these reading courses closely to the coursework being studied in the class. Customized components in INVEST will make these reading courses viable. (CAC)

Group study clusters have been promoted in many courses this semester. At the beginning of this semester, Cooperative Learning Center para-professional aides visited reading and English classrooms to sign up students into study groups. (CAC)

The paraprofessional aides have worked closely with individual students and with the classroom instructors to tie lab/group study work into course assignments. Our hope is that this cooperation will become even stronger in the fall, and that the new four hour courses offerings will improve attendance and retention. (CAC)

One of the most helpful practices for us this semester has been attending conferences at which we have been able to share information with our colleagues from other institutions. This sharing of information, especially with the CEOs of those involved in the League project, has given participants a feeling of camaraderie and shared commitment to the project. (CAC)

Our students' success was based on the INVEST workbooks and computer program use, especially by the ESL students. (CCCD)

Because during the fall semester, we offered the project to all sections of pre-algebra, the traffic in the ASC (our Academic Support Center which houses the compute lab) increased by about 1/3 over previous semester, to 500-600 students per week. (RICH)

Overall, I would say that using the INVEST in the pre-algebra classes was successful. Like every teaching tool, the compute didn't work for every student, but several student

evaluations stated that the students were really pleased with their grades in the class, and they attributed their success to their INVEST work. (RICH)

This semester a class of 28 students took a reading pre-assessment (Nelson-Denny) before using the INVEST system. The class upgraded their reading level significantly (2 grade levels) by the end of the term. (EPC)

We find that it (INVEST) is usually easy for motivated students (even relatively weak ones) to work independently on INVEST for General Math. (SF)

The students were on-line with INVEST approximately 75% of the course. The remaining time was spent conferencing with the instructor, working on group projects, researching difficult grammar problems in textbooks and listening to short presentations on selected topics. I would assume that the lecture portion of the course was no more than 2% of the hours devoted to this course. (MAR)

I modified my approach from the first semester by assigning the pre-tests, only from grammar and mechanics in Tier Two Writing. They then conferred with me and we filled out a grid with their scores and planned together which portions of the program they were going to work on. (MAR)

The instructors are currently developing notecards on the major topics to help facilitate class discussions. A typical class period involves directed class instruction from the notecards. Each notecard has an activity or interactive feature for students to contemplate. This helps ensure that the class remains truly interactive and that the students stay involved with the material throughout the entire period. (EC)

We spend time on grammar concepts in a lecture/demonstration format. The student then receive homework and labwork. On the computer they have the concepts again and self-testing/evaluating measures. (EPCC)

I required 1-hour out-of class time in the lab as well as devoting 1 hour of in-class time to the computer system. That gave students two hours per week working with INVEST. This provided a rapid-fire approach to vocabulary development and comprehensive instruction. (EPCC)

The orientation takes place in the lab during a scheduled class period, and in addition to technical support, the lab provides instructional support. (CFCC)

We determined that the INVEST software covers most of the grammar skills necessary for recognizing and editing sentences written in Standard Edited English. We also found that the software does so in a format that is easy to follow and one that progresses from one section to another. . . (CFCC)

Generally, an average of 30 minutes per week was spent in large group lecture with the remainder of class time allocated for individualized instruction. (CFCC)

Homework assignments were given daily to ensure continuos practice outside of the classroom setting. (CFCC)

The REA 00001 INVEST class was structured for the combined use of a textbook and the INVEST software. The class met three times per week with 50 minutes for each session. Typically, Mondays and Wednesdays were spent in the classroom for lecture, discussion, and group activities, and on Friday's, the class worked in the lab on INVEST software.

I, sometimes in conjunction with students, develop testing instruments to assess students' attainment of the skills and skills levels required by the curriculum. (CFCC)

Although I have "toyed with" various aspects of the program and have worked through some of the lessons, my involvement this semester has been more exploratory than scientific. (CFCC)

The INVEST workbooks for reading are used about ten hours a week. The INVEST computer program is used, on the average, seven hours a week (by each student). (CCCD)

Writing packets are worked on ten hours a week. Five hours a week are spent on the writing processor that goes with the INVEST program. Extra material, in order to improve writing skills, is given another five hours. (CCCD)

Components for reading:

10 hours a week	INVEST workbooks
7 hours a week	INVEST reading
3 hours a week	Extra material on vocabulary, supportive detail, conclusion, main idea

Components for writing:

10 hours a week	Writing packets developed by faculty
5 hours a week	INVEST writing processor
5 hours a week	Extra material on writing

Components for math:

7 hours a week	Invest Math workbook
5 hours a week	Extra material in decimal, fractions, and percents
8 hours a week	INVEST computer program

The INVEST software adds a lot of strength to the curriculum currently used in our classroom. Especially on the areas of spelling, vocabulary, and comprehension. (CCCD)

This (Introductory Algebra) course is being team taught by two instructors with similar instructional views. The primary components of the course include seven unit exams, a comprehensive final, a portfolio component, and an INVEST lab component. The class meets two days per week for an eighty minute period. This course is also part of El Centro's Title III initiative. (EC)

The instructors are currently developing notecards on the major topics to help facilitate class discussions. A typical class period involves directed class instruction from the notecards. Each notecard has an activity or interactive feature for students to contemplate. This helps ensure that the class remains truly interactive and that the students stay involved with the material throughout the entire period. (EC)

We spend time on grammar concepts in a lecture/demonstration format. The student then receive homework and labwork. On the computer they have the concepts again and self-testing/evaluating measures. (EPCC)

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Parts of the Developmental Reading (DR) 091 Course: (RICH)

Comprehension	Vocabulary
3/4 of the semester time	1/4 of the semester class time
2 1/2 class periods per week	3/4 of one class period per week

This semester students in English 107L, a basic developmental studies reading lab spent class time in the lab as part of the INVEST/League project. We used activities on Compton's Multimedia Encyclopedia to teach reading, vocabulary, critical thinking and research skills and INVEST to teach grammar and critical reading skills. (SF)

This semester we also had three different self-paced developmental math classes working in the lab--Math 100: Basic Math, Math 101: Pre-Algebra, and Math 102: Basic Algebra. (SF)

The students were on-line with INVEST approximately 75% of the course. The remaining time was spent conferencing with the instructor, working on group projects, researching difficult grammar problems in textbooks and listening to short presentations on selected topics. I would assume that the lecture portion of the course was no more than 2% of the hours devoted to this course. (MAR)

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INVEST

Comprehensive Curriculum

- *Three tiers of Reading (levels 0-12)
- *Three tiers of Mathematics with optional fourth tier in higher-level math (0-14)
- *Three tiers of Writing (0-12)
- *Life Skills
- *Learning Skills
- *Off-line Correlated Materials

INVEST

THREE-TIER CONSTRUCTION

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TIER 3

READING	MATH	WRITING	LEARNING SKILLS
Science	Decimals	Directed Writing Overlay Lessons Writing Processor Tools/Help	Test Taking
Social Studies	Fractions	Computer Lessons Sentence Structure & Usage	
Literature	Measurement	Mechanics	Using Graphic Resources
Vocabulary	Geometry		
	Algebra		

TIER 2

READING 4-6	READING 7-8	MATH	WRITING	LIFE SKILLS
Vocabulary/ Spelling	Vocabulary/ Spelling Content Area/ Critical Reading	Whole Numbers Number Concepts	Directed Writing Overlay Lessons	Following Directions
Usage	Social Studies	Decimals & Percents	Writing Processor	Job Search
Comprehension	Personal/ Family Health	Fractions	Tools/Help	Automobiles
Reference Skills	Job Awareness	Measurement	Computer Lessons	Personal Finances
Workbooks	Literature/ Pleasure Reading	Geometry	Parts of Speech	Using Resources
	Reference Skills	Pre-Algebra	Mechanics	Self-Awareness
		Graphs & Charts		Job Skills

TIER 1

READING	READING INTEGRATED	MATH	WRITING	SURVIVAL SKILLS
Vocabulary	Vocabulary/ Spelling	Number Concepts	Keyboarding	Walker Signs
Usage	Building Words	Operations	Talking Word Processor	Driver Signs
Comprehension	Comprehension	Measurement	Language Experience	Scheduling Phone Book Time
Spelling				

Guide Words

General subject areas are listed in bold type. Each word indentation indicates that another overlapping window will appear on screen.

Grammar/Usage

Parallel Construction

Parts of Speech

 Adjectives

 Adverbs

 Clauses

 Conjunctions

 Modifiers

 Nouns/Subjects

 Common/Proper

 Possessive Nouns

 Singular/Plural

 Identification of Nouns/Subjects

Prepositions/Prepositional Phrases

Pronouns

Verbs

 Auxiliary Verbs

 Subject/Verb Agreement

 Verb Forms

 Verb Tenses

Types of Words

 Compounds

 Contractions

 Heteronyms

 Homographs/Homonyms

 Synonyms/Antonyms

Skills in Living

Automobiles

Business Letters

Careers

 Employability Skills

 Employee Traits

 Communication Skills

 Searching for Jobs/Job Interviews

 Types of Jobs

 Chart Analysis

 Finding Resources

 Following Directions

 Forms

 Newspaper Sections

 Personal Finances/Budgets

 Personal Letters/Notes

 Planning Trips

 Reading Schedules

 Self-Awareness

Skills in Living (cont.)**Signs****Signs for Drivers**

Directional Signs

Informational Signs

City Signs

Highway Signs

Rural Signs

Signs for Walkers

Directional Signs

Informational Signs

Public Service Signs

Public Transportation Signs

Commercial Signs

Restaurant Signs

Grocery Signs

Hospital Signs

Test-Taking**Typing Skills****Mathematics****Addition**

Decimals

Facts Without Regrouping

Facts With Regrouping

Fractions Without Regrouping

Fractions With Regrouping

Integers

Mixed Numbers

Monomials/Polynomials

Signed Fractions

Units of Measurement

Algebra

Algebraic Expressions

Graphing

Integers

Linear Equations

Monomials/Polynomials

Number Properties

Square Roots

Vocabulary

Calculator Skills**Charts and Graphs****Decimals**

Addition

Comparison

Conversion

Division

Multiplication

Rounding

Subtraction

Mathematics (cont.)**Division**

- Facts Without Remainders
- Facts With Remainders
- Decimals
- Fractions
- Exponential Numbers
- Integers
- Mixed Numbers
- Monomials/Polynomials
- Signed Fractions

Fractions

- Addition
- Concept
- Conversion
- Division
- Equivalent Fractions
- Mixed Numbers
- Multiplication
- Signed Fractions
- Simplification
- Subtraction

Geometry

- Angles
- Identifying Shapes
- Lines/Line Segments/Rays
- Properties of Circles
- Similarity/Congruency
- Using Formulas
 - Solving for Area
 - Solving for Perimeter
 - Solving for Volume
 - Pythagorean Theorem
 - Reviewing Formulas

Measurement

- Calendar
- English
- Metric
- Miscellaneous Measures
- Temperature
- Time

Money

- Multiplication
 - Decimals
 - Exponential Numbers
 - Facts Without Regrouping
 - Facts With Regrouping
 - Fractions
 - Integers
 - Mixed Numbers
 - Monomials/Polynomials
 - Signed Fractions

Mathematics (cont.)**Numeration**

- Estimation
- Expanded Notation
- Exponential Numbers
- Factoring/Multiples of Numbers
- Greater Than/Less Than
- Matching Numbers to Words
- Number Patterns
- Percent
 - Conversion
 - Determining
- Place Value
- Roman Numerals
- Rounding
- Sets/Subsets
- Scientific Notation
- Statistics

Probability

- Problem Solving
- Ratio/Proportion

Subtraction

- Decimals
- Facts Without Regrouping
- Facts With Regrouping
- Fractions Without Regrouping
- Fractions With Regrouping
- Integers
- Mixed Numbers
- Monomials/Polynomials
- Signed Fractions
- Units of Measurement

Vocabulary**Mechanics**

- Abbreviations
- Capitalization
- Punctuation
 - Apostrophes/Quotation Marks
 - Colons/Semicolons
 - Commas
 - Miscellaneous
 - Sentence Endings

Phonics

- Affixes
- Decoding Words
- Letter Sounds
- Substitution of Initial Consonants
- Syllabication

Reading**Application of Critical Reading Skills**

- Animals
- Computers
- Health
- Holidays
- Job Descriptions
- Literature
 - Drama
 - Essays
 - Excerpts from Novels
 - Myths and Legends
 - Poetry
 - Short Stories
- Parenting
- Personal Experiences
- Science
 - Earth Science
 - Natural Science
 - Life Science
 - Overview of Science
 - Physical Science
- Scientific Discoveries
- Social Studies
 - American History
 - Economy
 - Equal Rights
 - Exploration/Expansion
 - Historical Figures
 - International Affairs
 - Patriotism
 - Technological Advances
 - Wars
- Behavioral Sciences
- Cultures
- Geography
- Political Science

Discrimination of Word Meaning

- Level 1
- Level 2
- Level 3
- Level 4
- Level 5
- Level 6
- Level 7
- Level 8
- Level 9
- Level 10
- Level 11

Identification of Words

- Level 1
 - Vocabulary
 - Sentences
- Level 2
- Level 3

Reading (cont.)

Level 4
 Level 5
 Level 6
 Level 7
 Level 8
 Level 9
 Level 10
 Level 11

Instruction of Critical Reading Skills

Analogies
 Author's Purpose
 Cause/Effect
 Characterization
 Comparing/Contrasting
 Drawing Conclusions
 Fact/Opinion
 Figures of Speech
 Foreshadowing
 Main Idea/Summarizing/Theme
 Making Inferences
 Mood and Setting
 Plot
 Point of View
 Predicting Outcomes
 Recalling/Supporting Details
 Review
 Sequencing
 Skimming/Scanning
 Symbolism
 Word Meaning
 Instructional Rationale
 Understanding Sentences
 Visual Discrimination

Reference Skills

Alphabetizing
 Classifying
 Using Reference Materials

Spelling

Level 1
 Compound Words
 Contractions
 Plurals
 Verbs
 Vocabulary
 Level 2
 Compound Words
 Contractions
 Plurals
 Prefixes
 Suffixes
 Verbs
 Vocabulary

Spelling (cont.)**Level 3**

- Compound Words
- Contractions
- Plurals
- Prefixes
- Suffixes
- Verbs
- Vocabulary

Level 4**Level 5****Level 6****Level 7****Level 8****Level 9****Level 10****Level 11****Writing****Language Experience**

- Level 1
- Level 2
- Level 3

Pre-Writing

- Answering Detail Questions
- Brainstorming
- Classifying
- Identifying Sentences
- Making Lists
- Mapping

Drafting

- Drafting General Sentences
- Topic, Supporting and Concluding Sentences
- Drafting General and Types of Paragraphs

Revising

- Best Word Choice
- Revising/Combining/Expanding Sentences
- Fragments/Run-Ons
- Paragraphs
- Subject Pertinence

Editing**Word Processing****Writing as a Process**

- Business Letters
- Essays/Essay Questions
- Memos
- Moral Dilemmas
- Personal Data Sheets/Résumés
- Personal Journal
- Personal Letters/Notes

INVEST MANAGEMENT SYSTEM

FEATURES AND BENEFITS

- On-Line Testing**
Five to twenty minutes testing for student placement.
- Diagnostic/Prescriptive Instructional Management**
Instructors maintain control of the learning process.
- Prescribe by Curriculum Area or Specific Objective**
- Individualized Mastery Percent**
Default set for 85%. May be altered for individuals or groups.
- Intelligent Branching**
Branches within prescriptions to accommodate individual strengths and weaknesses.
- Trouble Screen**
Flags students who are having difficulty mastering lessons or who are mastering lessons too easily.
- Time Clock**
Tracks time in center and/or time on-line.
- Track/Compare**
User-defined tracking by up to 64 characteristics.
- Multiple Reports**

The League For Innovation
and Invest Learning
A Partnership

Program I
Supplemental Text Program

- A. Each campus is loaded with all software curriculum on multiple file servers.**
- B. Book store will sell to each student access to all software for \$49.00.**
 - * Student may access software as long as they are enrolled at the college.**
- C. Bookstore will purchase initial 500 packages for \$39.20 per package.**
 - * Any packages not sold at the end of the school year may be returned for credit or invoiced in the new school year.**
 - * No commitment or expense to the college.**



The League For Innovation and Invest Learning A Partnership

Program II

Allow each community college to become a re-seller of basic skills to business and industry in the same geographic area that the community college serves.

Example:

Stand-Alone System desktop or laptop complete with invest STAR 2010 Basic skills program.

Includes:

- all software
- 486 computer with hard disk drive
- color monitor
- printer
- dup. masters for all workbooks

School Price: \$7995

Less 20% \$1599

Net to college: \$6396

Training and setup: \$ 500

*offered by community college

Total revenue to college

Per workstation \$2099

College commits to train one to two people and become a certified trainer for Invest software. Four day training would take place in San Diego at no charge. College is responsible for expenses. Estimated travel and hotel cost is approximately \$1200

*minimum lease order would be 5 units



The League For Innovation
and Invest Learning
A Partnership

Program II Alternate

Community College Rental to Business and Industry

Community College leases a complete system from Invest
 for \$2500 per ~~month~~^{year} (approx.) or 3 year lease.

- 1st payment due in 12 mo.
- funding out clause at end of each year.

Example:

Rental	\$ 150	Per week to business & industry	■
	<u>x 52</u>	Weeks	■
	\$7800	Revenue	■
	\$2500	Cost	■
	<u>\$ 500</u>	Training and support	■
	\$4800	Profit to college per year	■

Placements of 50 units in:

1st, 2nd, 3rd, year Hard \$ to college \$240,000 per year

4th year and up Hard \$ to college \$365,000 per year

you own



The PLACe helps Miramar College students collaborate in success

I have given up on a traditional lecture format and feel my students benefit to a greater degree from the INVEST software and the collaborative environment of The PLACe.

Diana Fink
PLACe Director



Miramar College Campus is one of the fastest growing colleges in the San Diego, California Community College District. Located at the north end of San Diego County, Miramar College is surrounded by Naval and Air Force national defense military operations and internationally leading biomedical science research institutes. This highly technical environmental challenges Miramar College to maintain and develop state-of-the-art instructional delivery and services to keep pace with the advanced needs of the community. For these reasons, Miramar College has selected INVEST in the Future™ software and are an exemplary partner in the Invest Learning LEAP national community college research project.

The Personal Learning Assistance Center, better known as The PLACe, at Miramar college serves over 1,000 students each semester with developmental English, math, writing courses and employment skills, study skills, and professional growth skills. Technological development for students is an important part of the Miramar College Mission and INVEST Learning software is the core curriculum for all students enrolled in course offerings at The PLACe.

Diana Fink, English faculty member and director of The PLACe, uses the INVEST Learning software with her class in group projects, and for class presentation projects. "I have given up on a traditional lecture format and feel my students benefit to a greater degree from the INVEST software and the collaborative environment of The PLACe."

Diana notes that the keys to the success of The PLACe are faculty development with INVEST software implementation and integration training, student orientation programs with technology tools, and tutors with content expertise. These factors maintain the integral high-tech, high-touch philosophy of the lab. In addition, Diana claims, "the Invest service and consultant support are exemplary."

Invest Learning, in conjunction with the League for Innovation in the Community College, and ACT (American College Testing) is engaged in a two-year comprehensive research evaluation project. The research design was developed and is conducted by the League for Innovation in the Community College. The research model and data resources include both qualitative and quantitative measures, using ACT computer-based COMPASS pre- and post-test measures, institutional reports, faculty narrative reports, student learning reports, and student, lab director, and faculty surveys.

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Invest Learning software is a comprehensive curriculum and delivers a range of instructional benefits for adult learners and at-risk youth:

- Developmental education needs can be met in a completely targeted and individualized mode based on results of on-line diagnostics.
- Over 6,000 on-line lessons in English, writing, and mathematics, are delivered in a critical thinking and analytical format
- Employability and professional development skills are an important part of the INVEST curriculum.
- State-of-the-art research tools are available on-line.
- Computer literacy is acquired while achieving other learning outcomes.

Dr. June Scoponich, Vice-President of Instruction at Miramar College, feels the partnership with Invest Learning is a progressive step forward for Miramar's exploding growth. Using Invest Learning software tools, The PLACe is able to address individual and unique student needs, these include: developmental education, vocational educational training programs, English as a Second Language (ESL) Programs, and programs exclusively designed for the physically disabled. "The partnership with Invest Learning and Miramar College has created a learning center that is student focused and learner driven."

For an update on the PLACe or more specific information about Miramar College, call Diana Fink at (619) 536-7852.



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Santa Fe Community College students enjoy and succeed using INVEST

I like INVEST software's user friendliness. It is useful, fun, and a good learning tool for my courses at SFCC.

Student
Santa Fe Community College

While preserving the truly rustic and beautiful culture of the old southwest, Santa Fe Community College (SFCC) has progressed into technology initiatives that include a high-tech facility, renovation of existing classrooms for computer presentation delivery, and real-time distance learning delivery. Invest Learning Software is an integral part of their high-tech plan. The Invest Learning computer lab at SFCC currently serves students in GED and ESL programs, Literacy Volunteers services, Job Training Partnership Act (JTPA) funded programs, and developmental education needs.

The INVEST In The Future™ software is a comprehensive curriculum and delivers a range of instructional benefits for adult learners and at-risk youth. Using INVEST, academic needs can be diagnosed and individually prescribed for each student enrolled in the myriad of college and academic programs offered at SFCC. Over 6,000 on-line lessons in English, writing, and mathematics are delivered using critical and analytical computer-based formats. In addition to meeting academic and basic skill development needs, employability and professional development skills are an important part of the INVEST curriculum.



Santa Fe Community College is a model site, demonstrating technology solutions for a variety of academic needs and student services. As a partner with Invest Learning, in conjunction with the League for Innovation in the Community College, and ACT (American College Testing), SFCC is engaged in a two-year comprehensive research project evaluating the relationship between student achievement and technology resources. The research design was developed and is conducted by the League for Innovation in the Community College. The research model and data resources include both qualitative and quantitative measures, using ACT computer-based COMPASS pre- and post-test measures, institutional reports, faculty narrative reports, student learning reports, student, lab director, and faculty surveys.

Student satisfaction with the INVEST system is exceptionally high. One student explains her experience in these words, "INVEST helps you work on things that you have problems on. I use the computers for math and the problems on the computer help you understand the rules of math. I feel if computers could be used for every subject, from history to accounting, it would help all students." The ease of use and the friendly interface is underscored by this comment from a SFCC student returning to college after a long

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absence from formal education, "INVEST helped me not be afraid of numbers." In a follow up report, the student's instructor noted that this particular SFCC student had a good deal of apprehension about taking a math course, but "found the Invest software so enjoyable and reinforcing that she not only improved her math skills, but her confidence has immensely improved over the term."

SFCC Faculty report that INVEST software correlates well to their course objectives and can be used in an open-entry, open-exit learning format. SFCC students use these adjectives to describe their experiences with Invest: "fun," "pressure-free," "easy to use," "helpful," "reinforcing," and "encouraging." The lab director sums up the INVEST Learning system in three succinct words—"students like it."

For more information about Santa Fe Community College, call Al Reed at (505) 471-8200.



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Tri-C helps Greater Cleveland maintain a global competitive stand

Invest software opens the door to higher education, new careers, and the future for my students.

Rob Mank
Project Director
Cuyahoga Community College



Cuyahoga Community College (Tri-C) is the third largest state supported college in Ohio and the largest in the Cleveland area. The campus provides a variety of community-based classes and serves over 55,000 students a year. Invest Learning software is used extensively at Cuyahoga Community College (Tri-C) to serve developmental education needs, as well as contract education outreach efforts to businesses and local public agencies.

The Greater Cleveland area continues to be a major manufacturing area and it is well-recognized that the current skill levels of the workforce must be constantly upgraded to maintain a competitive global stand. Recent review of Tri-C assessments reveal startling results surrounding math competency levels of the community. The results indicate that 93.4% of all students enrolling in Tri-C courses tested below the baseline college math level, and during the 1993/94 fall semester, 19.0% of all students enrolled at Tri-C were enrolled in developmental math courses. Tri-C has selected Invest Learning as their partner in creating high-quality technology-based solutions to these basic skill challenges.

As a self-funded and self-sustained division of the college, the Invest In The Future™ lab is used for multiple community outreach efforts and to serve skill training needs of industry partners. Funding for the lab has been successfully generated for over five years by contracts with partners, service training contracts, and collaborative efforts with community-based social service agencies. Customer satisfaction is an integral part of Invest Learning's service strategy and is also a key to the successful renewal and growth of Tri-C client-base and education contracts.

Cuyahoga Community College is a member college of the League for Innovation in the Community College and is noted for progressive solutions in meeting the needs of the sprawling greater Cleveland area. Tri-C uses technology tools and INVEST to serve the basic skill development of the State Worker's Association, the vocational and certification requirements of the State Allied Health Service Association, and the pre-employment skills and job maintenance needs of the national Veterans Upward Bound Program.

In addition, Tri-C is a participant in the Invest Learning, League for Innovation in the Community College, and ACT (American College Testing) a two-year comprehensive research evaluation project. The research design was developed and is conducted by the League for Innovation in the Community College. The research model and data resources include both qualitative and quantitative measures, using ACT computer-based COMPASS pre- and post-test measures, institutional reports, faculty narrative reports, student learning reports, and student, lab director, and faculty surveys.

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INVEST software and the flexibility of the management systems is a perfect fit for the open-entry, open-exit format of the TRI-C Lab and the INVEST diagnostic placement lessons challenge students with success regardless of their initial learning levels. The flexibility of INVEST courseware is underscored by the supplemental and core curricula correlations that address student needs from literacy development to students enrolled in general college programs.

For more information about Cuyahoga Community College call Ray Manik (216) 987-2135.



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Central Arizona College meets diverse student needs with INVEST

Lab directors use the comprehensive Invest Management System (IMS) to customize instructional content and correlate faculty course content with student work assignments.

Central Arizona College (CAC) is nestled in the Colorado Desert mountain range approximately seventy miles from the Phoenix metropolitan limits. The diversity of the rural setting and educational needs of the community draw over 5,000 part-time and full-time students annually.

The rural and remote environment bring a unique set of challenges to Central Arizona College and its service mission to the community. The service delivery area incorporates over 100 square miles, including Native American Reservation Lands. The average household income of the area is \$9,228, which places over 40% of the total population below the national poverty line. In addition, less than 30% of those officially counted within the total community hold a high school diploma or equivalent. Central Arizona College reflects the national average statistics, and enrolls more than 60% of their total student population into at least one developmental education class during the course of their college career.

With these dynamic needs and educational challenges, Central Arizona College chose Invest Learning as their educational partner for instructional technology. INVEST In The

Future™ software is an integral part of CAC and The Cooperative Learning Center. The technology rich resources of The Cooperative Learning Center are used in a variety of college course offerings. These include: developmental educational programs; vocational training programs; and community outreach services.

English as a Second Language (ESL) is an essential part of basic skill instruction at the college and the INVEST Lab at CAC offers customized instructional delivery for ESL students. At the lower end of the Invest Learning lesson library are reading, vocabulary, grammar, and life skills lessons with auditory and verbal practice components which are essential in language acquisition.

In addition to academic remediation, The Cooperative Learning Center uses INVEST software to sponsor an annual series of workshops that include time management, note taking, test taking, and research paper writing.

Jane Ellen Reid-Parks, Project Director of the Invest Learning LEAP research project at Central Arizona College, notes that faculty are impressed with the service mission and instructional quality of the Cooperative Learning Center and the INVEST software. Some of the ways faculty support the center is hold their office hours in the center and also make special appointment time with students to work in the lab.



Lab directors use the comprehensive Invest Management System (IMS) to customize instructional content and correlate faculty course content with student work assignments. Portfolio assignments, group study clusters, and tutor-based collaborative learning communities are some of the accomplishments made possible by the flexible technology of INVEST software and the dedicated staff of The Cooperative Learning Center.

For additional information about the Cooperative Learning Center or Central Arizona College, please call Jane Ellen Reid-Parks at (520) 426-4570.



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The Learning Resource Center helps CFCC students succeed

I wish I could take
all my college
courses using
INVEST

Student
Central Florida
Community College



The Invest Learning Lab is a vital part of the Learning Resource Center (LRC) at Central Florida Community College (CFCC) at Ocala. The LRC, the heart of student services of CFCC, hosts the Foreign Language Lab, Disabled Student Service Center, all developmental education courses, and the college tutorial staff.

The political climate surrounding state higher education in Florida is charged with greater accountability standards and measures of institutional effectiveness. The Florida College Literacy & Academic Skills Test (CLAST) is a state mandated assessment for students progressing to higher education levels and is administered as an admission requirement to Florida community college programs and universities. Central Florida Community College District has chosen Invest Learning as their key partner and INVEST In The Future™ software as their core curricula for student development and remediation of the CLAST reading, math, and English components. In addition to meeting the gamut of academic needs for students, INVEST software is used in courses aimed at development of pre-employment and work maturity competencies for students in career-tracked, vocational-based programs at CFCC.

The INVEST courseware is a comprehensive curriculum and delivers a range of instructional benefits for adult learners and at-risk youth. INVEST consists of over 6,000 on-line lessons in English, writing and mathematics, with employability and professional development skills.

In addition, Invest software is easily customized and individual prescriptions make it easy to correlate faculty course objectives to on-line lesson content. A faculty member at CFCC praises the outcomes of the INVEST system by noting, "I was much encouraged at the end because I observed the students participate in reading exercises that challenged their intellect and motivated their thinking."

CFCC is a partner with Invest Learning, the League for Innovation in the Community College, and ACT (American College Testing) in a two-year comprehensive research evaluation project. The research design was developed and is conducted by the League for Innovation in the Community College. The research model and data resources include both qualitative and quantitative measures, using ACT computer-based COMPASS pre- and post-test measures, institutional reports, faculty narrative reports, student learning reports, and student, lab director, and faculty surveys.

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After using the INVEST software system for one year, CFCC recognized greater gains in the number of students who completed developmental education courses and in their satisfaction with computer-based applications in the course assignments.

INVEST orientation lessons and use of technology tools has generated positive responses from students and measurable results. A CFCC student sums it all by saying, "I wish I could take all my college courses using INVEST."

For information about Central Florida Community College, please call June Jones at (904) 237-2111.



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El Centro College creates a learning community with two INVEST labs

The INVEST software compels students to actively participate; such active participation is critical for student success but too often not there with conventional instruction.

Harriet Crews
Project Director



Downtown Dallas, Texas is the bustling home base for El Centro College, the first college in the eight college district of the second largest community college district in the country. The downtown area reflects a wide variety of student demographics and a rich diversity of student needs. INVEST In The Future™ is the instructional technology software of choice to meet the full spectrum of El Centro College community needs.

In the fall of 1994, El Centro College opened their second INVEST Lab, a twenty-station facility designed to serve developmental education needs in reading, writing, and math skills. The first INVEST Lab, established in 1992, is used extensively and exclusively by the vocational education programs of El Centro College and funded with federal Carl Perkins Vocational Education resources. The lab is housed in the centrally located Learning Center, in a casual and relaxed setting, designed to be visible and more easily accessible to students. The college goal for the INVEST Lab is to enhance the progress of developmental studies students by combining innovative computer-based instructional delivery with traditional classroom teaching methods. Within the first semester of operation, the INVEST Lab at El Centro College served 1300 students.

Many students have found the missing link to successful learning using the INVEST Lab at El Centro College. Faculty members report that "unlike an instructor, INVEST operates without time constraints, putting at ease the student who is capable but needs repeated instruction and practice to make some essential skills or principles his/her own." El Centro college uses the INVEST curricula in a wide array of comprehensive instructional delivery methods that benefit adult students and at-risk youth. These include:

- Individualized Vocational Education Programs and targeted School-to-Work skill upgrades
- State mandated Texas Academic Skills Program (TASP) preparation programs with time and task accountability requirements tracked by the state-of-the-art INVEST Management System (IMS)
- Developmental learning programs in reading, writing, and mathematics are delivered and customized for student instruction

Harriet Crews, Project Director and Developmental Reading Department Chair, claims, "The INVEST Lab is a great boon both to students and to faculty. Perhaps the greatest benefit to students is that the system requires them to engage in the subject. The Invest software compels students to actively participate; such active participation is critical for student success but too often not there with conventional instruction."

In addition, Harriet states, "A secondary benefit of the INVEST Lab to students is the collaborative learning which often takes place as students begin to learn from and teach each other." As students support each other and learn together, they create for themselves a learning community. The INVEST Lab offers a center at which both students and instructors meet outside of the traditional classrooms, faculty too become members of those informal learning communities.

In addition to multiple teaching and learning benefits, the INVEST Lab offers "enormous opportunity for faculty development, collaboration among faculty — full-time and part-time — and immediate responses to student progress and intervention strategies by faculty members."

Helping to keep the downtown center alive, vital, and productive is a key mission of the Dallas County Community College District and Chancellor Wenrich asserts, 'Our partnership with Invest Learning exemplifies our commitment to quality, excellence, and service for all students.'

For more information about El Centro College, call Harriet Crews at (214) 746-2092



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El Paso Community College responds to diverse community needs

Our students benefit from the high quality, technology-based instructional programs, especially in English as a Second Language and basic skills.

Dr. Adriana D. Barrera
President
El Paso County Community College District



El Paso Community College (EPCC) has a long-standing partnership with Invest Learning to deliver educational software solutions to one of the fastest growing regions in the state of Texas. In addition to the rich diverse cultural heritage and a demographic population that is 80% Hispanic, the city of El Paso is at the threshold of dynamic and transformational global change. The North American Free Trade Amendment (NAFTA) initiatives have invigorated the U.S. border town and El Paso Community Colleges have grasped a golden opportunity to serve their community and community needs. Industry incentives have attracted more progressive businesses to El Paso and the demand for skilled workers has risen significantly.

EPCC has responded to these needs by using Invest In The Future™ software as both core and supplemental in their expanding course offerings. EPCC is changing their traditional educational delivery strategies and focusing on technological integration and student-centered delivery methods in adult basic education courses, English as a Second Language (ESL) programs, vocational, technical, and certification training programs.

The success of these new technology initiatives is part of a two-year comprehensive research evaluation project. Invest Learning, in conjunction with the League for Innovation in the Community College, ACT (American College Testing), and EPCC are engaged in this study to analyze the effects of technological implementation models, faculty development issues, and student satisfaction. The research design was developed and is being conducted by the League for Innovation in the Community College. The research model and data resources include both qualitative and quantitative measures, using ACT computer-based COMPASS pre- and post-test measures, institutional reports, faculty narrative reports, student learning reports, and student, lab director, and faculty surveys.

Using the INVEST system, EPCC faculty and lab staff generate individual prescriptions for over 5,000 students a semester at three campus locations. The ease of the management systems and the breadth of the INVEST curricula library addresses the spectrum of faculty criteria and student development needs for college level preparedness. Staff members work with faculty to prescribe INVEST components for their classes, monitor progress of students, and produce student reports regarding academic development.

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In addition to basic skill development, INVEST is used to provide training in computer information systems, information processing, medical terminology, economics, ESOL, psychology, and literacy. The Career Training Center uses INVEST to teach word processing, bookkeeping, and computer accounting. The INVEST lab is an open-entry, open-exit format with the lab open 13 hours a day, Monday - Friday and 5 hours on Saturday to meet student schedule needs.

The leadership at EPCC recognizes the holistic demands of successful technological integration and concedes, "El Paso Community College and Invest Learning have a winning partnership—our students benefit from the high quality, technology-based instructional programs, especially in English as a Second Language and basic skills."

For an more specific information about El Paso Community College, call Shirley Gilbert at (915) 877-4834.



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Results

Study finds Stoddard Learning Lab an excellent value for basic skills education in the Utah Valley.

Since 1989, Utah Valley State College's Mountainland Applied Technology Center has been helping members of the community acquire basic math, reading and survival skills. The Stoddard Learning Lab meets the needs of many different types of learners, from high school students who need to make up credits to graduate from nearby school districts, to mentally handicapped adults who need to learn how to balance a checkbook or find an apartment, to welfare recipients trying to improve their chance of employment.

To serve all these different individuals and provide for the strict reporting requirements of the referring agencies, the Stoddard Lab uses INVEST In The Future™, a comprehensive, managed, basic skills software program which includes over 3000 lessons in reading, math, writing, keyboarding and basic skills. Students take a placement test then progress through the program at their own pace. INVEST tracks each individual's performance, making it easy for students to start and stop at any time and for the lab administrators to keep comprehensive records of every student's status.

The lab includes 15 INVEST workstations available 56 hours weekly. The computers enable the lab to maintain a completely open entry/open exit policy, allowing customizable instruction to any member of the community over age 16. The flexibility makes the lab ideal for working adults who would like to improve their academic skills as well as for traditional students and government program participants. Lab instructors monitor students through weekly progress reports, providing off-line instruction on an individual basis.

A research study of the program found that "significant progress in developing the skills necessary for meaningful employment is made by the participants of the Stoddard Learning Lab." The random sampling of students from a wide variety of backgrounds all showed improvement after spending time with the INVEST program. Further analysis revealed that the average student progressed one grade level after 14.42 hours of computer learning, at an estimated cost of \$18.75 per hour.

Measuring success:

The average student progressed one grade level after 14.42 hours of computer learning.

Estimated costs of the program:

\$1.30 per hour

\$18.75 per grade level increase

"The conclusion is straight forward: significant progress in developing the skills essential for meaningful employment is made by participants of the Stoddard Learning Lab."

The Stoddard Learning Lab at the Mountainland Applied Technology Center of Utah Valley State College

INVEST Learning

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Another Basic Success.

The lab serves as a community resource for many different state, federal, and private agencies reaching out to many different types of learners. Among the groups who use the Stoddard Lab are:

Adults in Transition (Outreach) - This agency uses the lab to teach basic survival skills to severely mentally handicapped students between the ages of 18 and 23. Students learn basic reading and math, as well as life skills such as buying a car or balancing a checkbook.

American Institute of Medical and Dental Technology - This school refers students to the lab when they do not meet the minimum entrance requirements for its programs. Students are able to quickly progress so they can begin their technical training without delay.

Center for High School Study - These adults earn math and English credits toward a diploma or a GED.

Job Partnership-Training Act - These students earn financial support while they improve their employability skills.

Turning Point (and ESL) - Many of the referrals are non-English speaking students who use English Express, an additional interactive curriculum to the INVEST program. The success of English Express for Turning Point has encouraged other non-English speakers in the community to come to the lab to improve their language skills.

Alpine, Nebo and Provo School Districts - These districts use the lab for students who need to make up credits or as an additional learning resource. Schools use the INVEST reports to translate time and progress into appropriate high school credit.

Project Read - This program helps adults who read below a third grade level improve their basic skills to prepare them for employment.

Self Sufficiency - These participants have been referred through the Utah state welfare agency.

UVSC in Orem - Students in Vocational Education programs from the Orem campus often use the Stoddard Lab. Students who haven't met the minimum qualifications for the VocEd programs use the lab to gain the required skills, working on their own initiative at their own pace.

VocRehab - These students have suffered physical or psychological setbacks and need retraining to re-enter the work force.

For a complete copy of the study, please call 1-800-927-9997.



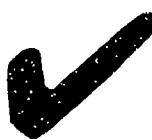
9920 Pacific Heights Blvd.
Suite 100
San Diego, CA 92121-4330
1-800-927-9997
FAX 619-677-0586

**Doing great things in your lab?
We want to recognize you!**

Invest Learning announces the Innovator Award.

Invest Learning would like to feature our outstanding labs using our products in innovative ways. To qualify, a lab must show excellence based on one or more of the following criteria:

- Innovations - in community service, student delivery or outreach programs.
- Individualization - in student progress, student development or program delivery.
- Instruction - such as unique custom curricula, contemporary curriculum development, staff or faculty development initiatives.
- Percentage of Learners who have achieved their GED or diploma.
- Percentage of Learners who have gained their skill growth



- National recognition - as a result of or in addition to the use of INVEST or STAR.

Selected lab directors will receive a handsome engraved plaque presented by an Invest Learning representative plus appropriate local recognition. In addition, Invest Learning will complement the award with other opportunities for professional grants on selected activities, customized to each individual recipient.

To enter, please send a description of your program to your Invest educational consultant or sales representative. The deadline for the first *Innovator* is December 1. A committee will evaluate the nominations and announce the winners in January, 1996.



Community College project serves over 1,500

Project LEAP, Invest Learning's partnership with the League for Innovation in the Community College and American College Testing, reached a milestone recently by serving over 1,500 students in the 14 demonstration sites across the country.

The project began in 1994 as a partnership to assist community colleges in providing relevant, effective developmental education to help adults succeed in further educational programs. Fourteen sites installed 20-station INVEST labs on their campuses and continue to collect data for evaluation on an ongoing basis throughout the project.

So far, faculty, students and lab supervisors have favorable comments about the program:

- Faculty surveyed believe the "potential exists" to use INVEST for up to 80% of the student contact hours.

- Within two weeks of using the program, 75% of the students surveyed felt "more comfortable" using computers.
- Lab supervisors rated the INVEST Management and Reporting System as "functional, comprehensive, and easy to navigate."

League for Innovation associate director Larry Johnson believes in the importance of the LEAP project. "This project is a watershed event for developmental educators throughout the nation, who have not benefited from this kind of a national look at developmental outcomes before," Johnson said. "The research derived will contribute to the understanding of how to help developmental students succeed."

As to the success of the Invest courseware, Johnson adds, "the program is on track and the early indicators show that the results of the project will be very positive for Invest Learning."

The Internet User Group also has a variety of projects in the works, they include:

- development of a tutorial (written in Toolbook) which we hope to install on the WAN;
- development of resource libraries, with material on Internet, at the five locations;
- central access points for those not on the WAN;
- development and scheduling of workshops;
- development of training materials;
- plotting a GUI (graphical user interface) for a point and drag "front end" environment; and
- a host of other research projects .

With Internet on the rise around the world, its availability draws nearer to SDCCD and the enthusiasm is growing even more rapidly each day. The project team encourages your participation in the District wide user group. For further information, or if you have time to donate, contact your site coordinator. We need, want and encourage your participation and assistance.



Cherie Bromley-Taylor, Chair, Mesa 627-2773	Gary Van Beenen, District Office	584-6565
Lyon, Cont. Ed	221-6973	Glenn Bowers, Info. Systems & Svcs	584-7303
Matthews, Miramar	536-7366	Mark St. Clair, Info. Systems/Svcs ..	584-6917 x 508
Watson, City	230-2639	Kent Keyser, Info. Systems & Svcs	584-7323

By Cherie Bromley-Taylor

INTEGRATED LEARNING SYSTEM "INVEST" PROJECT

On March 8, 1994, the District entered into a major, two-year research initiative involving the cooperative efforts of key community colleges across North America, the League for Innovation in the Community College, and Jostens Learning Corporation (now called Invest Learning). INVEST was developed specifically for the at-risk adult learner and encompasses adult-focused instruction in reading, language skills, mathematics, writing and life skills. INVEST includes materials for all learner levels from non-readers through pre-college level. The purposes of the project are: 1) to investigate the various ways INVEST can be applied to the teaching and learning of adults in developmental education programs at selected two-year colleges, and 2) to determine the relationship between several instructional delivery factors and the learning gains of the students using the integrated learning system.

In order to implement this project, a 20-station Novell-networked computer lab was implemented at Mesa College, in an existing lab, and a 20-station lab was set up at Miramar College. These labs will include 20 stations of INVEST and other applicable Invest Learning Adult Education division software, including Pre-calculus, Explorations in Math, Research Center with Compton's MultiMedia Encyclopedia, English Express, On-Line Links (TABE & CASAS) and Job Task Link.

Wayman Johnson has been designated project director and Joe McGerald has been designated as the lab supervisor for Mesa College. For Miramar College, Diana Fink will serve as project director and Carol Murphy will serve as lab supervisor.

Miramar Update

Currently, Miramar's lab is up and running. We have pre-tested two English 50, one English 55 and two Math 54 classes on the ACT COMPASS computerized testing program. One English 50 class is running exclusively in the INVEST lab and one Math 54 class has been assigned lab hours in addition to the regular lecture. Total enrollment for both is 68. Additionally, we have two English 55 and two English 56 classes using the lab for extra assistance and extra credit hours. As of today, we have 136 students logged into the INVEST system.

Personal Growth 127 classes (enrollment of 122) will be assigned soon for the Life Skills component. Each of those students has had a Meyers/Briggs assessment and the counseling department intends to study the relative success in the lab to the students' Meyers/Briggs profiles.

The Faculty Advisory Committee in the PLACe tutorial center received orientation on the system on Sept. 15 and FLEX training for the campus will be available in November. An Open House has been scheduled for October to publicize the center to the District and community.

By Diana Fink

Mesa Update

The INVEST Software has successfully been installed and is operational at Mesa. We are still awaiting receipt of the Digspeech units which will enable us to use the English Express portion of the software.

The first class of 38 students is scheduled to take the COMPASS assessment test on Friday, Sept. 16. We are looking forward to a number of other classes becoming actively involved with INVEST in the near future.



PHOENIX CONFERENCE CALL FOR PROPOSALS

The Call for Proposals has been issued for the League's annual Conference on Information Technology to be held in Phoenix, Arizona, November 13-16, 1996. The conference has become the principal showcase of applications of information technology designed to improve teaching and learning and institutional management in community colleges. The conference attracts more than 2,500 participants annually. Proposals are cordially invited from faculty and staff in all two-year colleges.

The 1996 conference focuses on the ways information technology can help the comprehensive community college to accomplish its complex mission. This focus, articulated in eight program tracks, encompasses all applications of information technology—from providing instruction to delivering student services, managing the organization, and providing access to programs and services for community colleges' diverse clientele.

All faculty, staff, and administrators in community colleges who are interested in the changes technology is making in the ways they teach, learn, and work—regardless and in the available time—are invited to participate in the conference and ideas. Conference proposal forms are completed proposals must be received by March 15, 1996.

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colleges.

INVEST LEARNING PROJECT DEMONSTRATES STUDENT SUCCESS

The Developmental Education Demonstration Project, jointly sponsored by Invest Learning, the League for Innovation, and American College Testing (ACT), concluded with the fall 1995 semester.

A preliminary analysis of the first year's data uncovered significant findings in three major areas of interest: drop-out rates were significantly lower for students using the Invest Learning software than for all developmental students at the colleges involved; GPAs for reading and writing were higher for students using the Invest Learning system; and student comfort with the Invest class was related to whether or not they felt computer lessons "were a good fit" with their other coursework.

The study spanned two years and included thousands of students across the country. League colleges participating in the study were Cuyahoga Community College; El Centro College and Richland College in the Dallas County Community College District; and Mesa College and Miramar College in the San Diego Community College District. Complete results will be available from the League office by May 1996.

Partners in Technology Winners

Houghton Mifflin Company announced the winners of its second annual Partners in Technology program at the November Conference on Information Technology in Kansas City. Guy Hancock, St. Petersburg Junior College, received the award in the distance learning category; Paula Noeller, Catonsville Community College, won in the multimedia tutorials category; and Louise Wood, Tri-County Technical College, received the award in computers and writing. The Partners program honors community college faculty who have brought their dedication, creativity, people skills, and insight to the demands of integrating technology into the curriculum.



INFORMATION TECHNOLOGY INITIATIVE

1995 Campus Computing Survey

The 1995 Campus Computing Survey, which emerged from a League project in collaboration with the James Irvine Foundation, is based on data provided by computing officials (typically the chief academic computing officer) at some 650 two- and four-year colleges and universities across the United States. Participating campuses, which include most of the League colleges, completed the survey during fall 1995.

Major findings of the study included the following:

- Big gains in the use of technology in college courses this past year;
- 7 million Internet and WWW users at U.S. colleges and universities;
- Colleges and universities are using the WWW to reach off-campus audiences;
- Colleges are cautious about embracing Windows 95;
- User-support issues are a major concern;
- Most campuses do not have a financial model for "acquiring and retiring" technology.

Copies of the 1995 Campus Computing Report are available from Campus Computing for \$35 (prepaid): Kenneth Green, Campus Computing, P.O. Box 261242, Encino, CA, 91426-1242; (818) 990-2212 (phone & fax). cgreen@earthlink.net

Invest Learning Leap Project Reaches Major Milestone

The Invest Learning LEAP project, a collaboration between the League, American College Testing (ACT), and the Invest Learning Corporation, has completed the end of its first year and the first semester of data collection. The goals of the two-year project are to: 1) determine the benefits of integrated learning systems, specifically INVEST, for developmental students; 2) find the most effective instructional models among those used at the colleges involved in the study; and 3) develop guidelines for the use of integrated learning systems as a teaching and learning tool for developmental students.

Twelve college campuses have participated thus far, and nearly 1,600 students (an average 100 per site) are involved in the project's first cohort. (This is in addition to the 707 students who participated in the project's pilot semester.) It is estimated that over the course of the project, more than 5,000 students will participate.

Of particular interest to the researchers is the nature and variety of instructional approaches used at the various sites. It is anticipated that these approaches will change or evolve over the course of the project. A longitudinal design is being used to capture such changes or evolutions, which will also allow for the effect of experience to be included as a key factor.

A series of controlled statistical analyses is underway with a variety of outcome-related variables, including course completion rates (retention), developmental course grades, GPA, and COMPASS post scores. As the project and the study progress, the researchers plan to release findings and other information in *SIGNALS*; once the study is complete, a final report will be available from the League office and via the Internet.

PROJECT SYNERGY

(Continued from page 1)

math courses at the community college level.

In addition, this fall MDCC will be classroom beta-testing the capstone of Project SYNERGY: Project SYNERGY Integrator (PSI), a Windows-based open-architecture adaptive instructional management system. PSI incorporates Project SYNERGY learning objectives and mastery test questions and includes multivendor software for assessment and instruction. It provides linkages between placement testing, learning objectives, instructional software, and mastery tests so that students can make a seamless transition from one objective to another, from one piece of software to another, and from one course to another. The software, developed in response to faculty specifications, is easy for instructors to use and to customize for instructional and administrative purposes.

With the public release of PSI expected in early 1996, project director **Kamala Anandam** believes Project SYNERGY will

support both educators and software vendors in making the shift required to deal with the problem of the underprepared student. Anandam says, "With PSI, educators are expected to question their traditional practices and evaluate whether or not these traditions have a role in the paradigm shift, and, if they do, in what form. On the other hand, software vendors are encouraged to focus on developing the much-needed quality learning modules, which can be managed by PSI, rather than devoting so many resources to different management systems. Because of its open architecture, PSI becomes the platform of neutrality, placing the educators in the driver's seat."

Project participants will be discussing what they have learned, as well as demonstrating PSI and other SYNERGY-related products, at the five-year celebration of Project SYNERGY scheduled for the League conference in November.

WWW site

For more information on Project SYNERGY and its products and outcomes, connect to the Project SYNERGY home page at <http://www.mdcc.edu/synergy/>

DATATEL Awards \$125,000 in Academic Scholarships

For the fifth consecutive year, **Datatel, Inc.** has awarded student scholarships for the 1995-96 academic year. The Datatel Scholars Foundation has now given over \$375,000 to more than 350 students since the program was established in 1990. "The Datatel Scholars Foundation allows us to directly contribute to our core business, higher education, as well as to those students our client institutions serve," said H. Russell Griffith, president and CEO of Datatel. "We cannot think of a better method for serving our three key constituencies: co-workers, clients, and company."

Students are nominated by financial aid officers at Datatel-client institutions. The scholarships are awarded for academic merit and community activities, based on letters of recommendation submitted by their colleges. Successful applicants this year include students from **Central Community College, Delta College, Hagerstown Junior College, Salish Kootenai College, Sinclair Community College, and Texas State Technical College-Harlingen**.

BEST COPY AVAILABLE

INFORMATION TECHNOLOGY INITIATIVE

The League's Information Technology Initiative, originally launched as "The Community College and the Computer" project, is now in its eleventh year. The project was renamed this year to reflect changing trends in technology usage and practices in community colleges, the breadth of which is now much more than just computers. The purpose of the project, as it has been from the beginning, is to help community colleges to improve teaching and learning and institutional management through information technology applications. The project continues to be supported by partner dues, contracts or services, and conference income.



Six New Partners Join Project

Six new companies have joined the League's Information Technology Initiative in recent months. New partners are: Asymetrix Corporation, Dell Computer Corporation, Eastman Kodak Corporation, International Thomson Publishing, McGraw Hill-Glencoe Division, and Software AG. These new partners bring the total of active technology partners to 34.

Project Synergy Expansion Continues

Project SYNERGY continues to work with a number of independent software companies to revise their instructional software so that it will be compatible with the Project SYNERGY Integrator (PSI) currently under development by Project SYNERGY staff. PSI, an open-architecture software management system, is slated for its public debut at the 1995 Conference on Information Technology, to be held November 5-8 in Kansas City, Missouri.

Forces with EDUCOM's National Learning Infrastructure, and issued a formal request for partners (RFP) as a result. The RFP asks for NLII partners in business, industry, and to develop tools and instructional software which will



INVEST Learning Demonstration Centers

Phase I of this funded project, sponsored by INVEST Learning Corporation and coordinated by the League, is complete. A significant amount of data has been collected from the 15 regional demonstration centers that have been installed in selected colleges across the country. League colleges involved in the project include Richland College and El Centro College of the Dallas County Community College District, and Cuyahoga Community College.

An interim report is being prepared for the November meeting of the site-based project directors, which will be held in Kansas City. It is estimated that over the course of the project, between 4,000 and 5,000 students will participate. A final report is expected in February 1996.

Information Technology Conference Plans

(Continued from page 1)

League conference ever. League colleges are eligible for a \$100 discount off the regular \$350 conference fee. The conference program and other related information are available on-line on the conference web page (<http://www.jolmco.cc.ks.us/projects/leagueconference.html>). Call the League office for a copy of the program.

Joint U.K./U.S. League/College Board Project

The College Board, in collaboration with both the U.S.- and U.K.-based Leagues for Innovation, (see related story on page 3) has initiated a project to adapt its CPT, LOEP, and Guides assessment software to English speakers in the United Kingdom. Eleven colleges of further education are participating in the project, which The College Board considers to be a natural extension of similar and very successful U.S. and Canadian projects in which League colleges played a major role.

NEW DISTANCE LEARNING MONOGRAPH

A new League monograph, under the leadership of Judy Lever, Miami-Dade Community College, is well underway toward an expected fall release date. Over 90 colleges submitted proposals to be included in the project. Fifteen colleges, including Miami-Dade Community College, Dallas County Community College District, Sinclair Community College, Foothill College, and Rio Salado Community College will be featured in special sections of the report. The remaining 75 colleges that submitted proposals will also be included, with summary descriptions of their program.

TECHNOLOGY CONFERENCE CALL FOR PRESENTATIONS

The call for proposals has been issued for the League's annual Conference on Information Technology to be held in Kansas City, Missouri, November 5-8, 1995. The conference has become the principal showcase of applications of information technology designed to improve teaching and learning and institutional management in community colleges. The conference attracts more than 2,200 participants annually. Proposals are cordially invited from faculty and staff in all two-year colleges in the United States, Canada, and throughout the world.

The 1995 conference will focus on the ways information technology is utilized by the modern comprehensive community college as it remodels itself to meet the increasing and changing needs of its students, its communities, and the nation. Presentations are encouraged that describe applications of information technology in providing instruction, delivering student services, managing the organization, and providing access to programs and services for the diverse clientele of community colleges—in short, applications that help institutions do all of the things community colleges must do to assist in solving educational and economic problems. Among the program tracks of more interest to technical staff are networks and networking, including the Internet, balancing security issues with the need to share information, telephony, and multimedia production and development.

The intended audience is faculty, staff, and administrators in community colleges interested in the impact technology is having on their institutions—*regardless of technical sophistication*. Cohosts for the 1995 conference are *Joint College, Kansas City-Kansas Community and Community Colleges.* Presentations are available from the League office. *Submissions are received by March 17, 1995.*

INVEST LEARNING/ACT PROJECT

COMPLETES FIRST PHASE

The implementation phase of the 15-college Invest Learning/ACT/League developmental education demonstration center project was completed with the close of the fall semester. Demonstration labs—installed, configured, and tested this past fall—are now up and running at all planned sites, including those at League colleges, Richland College, El Centro College, and Cuyahoga Community College. At a meeting of site-based project directors this past November, final details related to the two-year project's research design and instrumentation components were completed, paving the way for full-scale data collection to begin in the spring.

Among the items to be studied at the various sites are student satisfaction and success in computerized-learning environments, teaching strategies and techniques best suited for such environments, and the persistence and success rates of developmental students who learn in a computerized environment compared to those who learn in traditional settings. Over the course of the project, as many as 5,000 developmental students from across the nation may be studied. Targeted developmental disciplines include math, reading, writing, and English as a second language. As the project progresses, interim results from the project will be provided to interested League colleges through their representatives.



THE COMMUNITY COLLEGE AND THE COMPUTER

Critical Thinking Project Directors Plan Joint Venture

Representatives of eleven League colleges exploring participation in the Critical-Thinking Project attended an information exchange session in Houston, Texas, on November 14, 1994. The Critical-Thinking Project, a joint venture of the League and the Educational Testing Service (ETS), is designed to improve critical-thinking aspects of the curriculum and assess the ability of students to improve their critical thinking skills. Colleges participating in the project will meet again on March 24, 1995, in Bay City, Michigan, at a meeting hosted by Delta College.

WORKFORCE 2000

(continued from page 1)

Departments of Commerce, Education, and Labor; and the 12 Charter Partners in the League's Workforce Initiative: American College Testing, Apple Computer, Inc., The College Board, Educational Testing Service, IBM Corporation, Invest Learning, National Association of Manufacturers, PBS Adult Learning Service, Sallie Mae, Training and Simulation Technology Consortium, Inc., TRO Learning, Inc., and Zenger-Miller/Education & Economic Development Division.

The 1996 "WORKFORCE 2000" conference will be held in Orlando, January 31-February 3.

League and Jones Announce The International Community College (continued from page 1)

President, Global Operations for Jones Education Networks (JEN) announced the working agreement for The International Community College during a keynote address in Edinburgh, Scotland.

A task force representing the League for Innovation in the Community College and Jones Education Networks is actively working on the final details of the infrastructure. The ICC will be the first satellite and cable-based international campus for higher education. As planned, the college will utilize state-of-the-art educational technologies to allow adult learners across the globe to benefit from workforce development, developmental, certificate, and associate degree programs developed either by the League's member colleges, or directly by The ICC itself.

Paul Eisner, president of the League and chancellor of the **Maricopa Community Colleges** in Phoenix, Arizona, notes that JEN's Mind Extension Univer-

sity has been a pioneer in the use of communications technology for delivering education. That experience, coupled with League colleges' rich experience in creating distance learning programs, has generated considerable early interest in The ICC, which plans to develop programs that will be beamed into North America, South America, Europe, Asia, and Africa.

The International Community College will offer programs designed to meet the broad range of educational needs represented by a global student population, including English as a second language (ESL) classes, literacy and numeracy skills programs, and business and technical training programs that will provide academic credits that may transfer towards associate and advanced degree completion programs. The League office will disseminate more complete details on The ICC to League and ACCI members as they become available.

COLLABORATION ANNOUNCED BETWEEN ACCI COLLEGES, PARTNERS

TRG, Inc., (formerly The Robinson Group, Ltd.), **IBM**, the **Metropolitan Community Colleges**, the **College of Lake County**, and **Atlantic Community College** have formed a new partnership that will review student-related business processes to identify more efficient and effective ways to increase productivity, improve services to students, and increase the professional level of staff work. Goals of the partnership include implementing voice response touch-tone applications, a kiosk-based campus information system, and designing a new, student-focused, information system.

Representatives from each partner institution will participate in group design sessions where information will be shared and ideas generated to ensure that the new systems are being designed to best serve students, faculty, and administrative staff. One of the functional modules to be developed is a Financial Aid Module/System.

The new systems, which are expected to be available in two years, will use a client/server approach, will operate on one or more UNIX-based servers, and

will be accessible from networked personal computers and/or touch-screen kiosks. Planned applications include registration and credit card payment via touch-tone telephone; and access to course schedules, financial aid standing, and transcripts via touch-screen kiosk.

The new partnership will build on the contributions of staff from **Sinclair Community College** and **Brevard Community College** who have been working with TRG on the kiosk-based, campus information system for some time. Sinclair Community College designed an "expert system" component for advising students regarding which major they should choose and how many credit hours they should take. TRG has incorporated the design into *Intouch* so that students may interactively prepare for an advising session prior to seeing an advisor, augment the activities conducted in conjunction with an advisor, and/or interact with the system in a self-advising session. Brevard Community College uses multimedia in its version of the campus information system so that students may view information in textual, animated, graphic, and/or multimedia form.

STUDY OF INTEGRATED LEARNING SYSTEMS LAUNCHED

The League, in cooperation with the **INVEST Learning Corporation**, has launched a two-year national study of integrated learning systems and their use in developmental education. The goals of the project are to: 1) determine the benefits of integrated learning systems, specifically INVEST, for developmental students; 2) ascertain the most efficacious instructional models among those used at the 12 college campuses involved in the study; and 3) develop guidelines for the use of integrated learning systems as a teaching and learning tool for developmental students.

Twelve college campuses (nine college districts from across the nation) will participate with 1,650 total estimated students (average 150 per site) involved in the project's first cohort. It is estimated that over the course of the project, between 4,000 and 5,000 students will participate.

To launch the project, the 12 campus-based project directors met with representatives of INVEST Learning Corporation, the League for Innovation, and **American College Testing** in Phoenix, Arizona, June 22-24. All major design elements were agreed upon, including the key research areas and questions, essential data elements and collection approaches, the number and types of reports to be submitted, the report contents and time lines, and the analytical approaches to be used for each research area. In addition, agreement was reached on the process, scope, and manner of data collection, including the standardization of key data and design-related components across all participating institutions.



THE COMMUNITY COLLEGE AND THE COMPUTER

New Partners Join Project

SYLLABUS Press, Jones Education Networks, and ROLM, a Siemens Company, are the most recent partners to join the League's "Community College and the Computer" project. The international technology initiative, now in its tenth anniversary year, seeks to engage technology-related companies in joint projects with community colleges that apply information technology to the tasks of teaching, learning, and institutional management. SYLLABUS Press publishes a technology journal for higher education with a subscriber base of over 70,000. Jones Education Networks is a family of education networks designed to extend the reach of education to lifelong learners, regardless of where they live. Mind Extension University, the flagship of Jones

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ies. ROLM, a Siemens Company, is a leading
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tions. As a member of the Siemens family, ROLM
logy, financial strength, and market presence in



INVEST Learning Corporation/ACT/League National Research Project Launched

The League, in cooperation with the INVEST Learning Corporation and ACT, has launched a two-year national study of integrated learning systems and their use in developmental education. The goals of the project are to: 1) determine the benefits of integrated learning systems, specifically INVEST, for developmental students; 2) ascertain the most efficacious instructional models among those used at the 12 college campuses involved in the study; and 3) develop guidelines for the use of integrated learning systems as a teaching and learning tool for developmental students.

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Participants. Twelve college campuses (nine college districts) will participate with 1,650 total estimated students (average 150 per site) involved in the project's first cohort. Breakdowns of the first cohort by disciplines are: Reading (575 students, average 52.3 per site); Writing (470 students, average 42.7 per site); Math (605 students, average 55 per site). It is estimated that over the course of the project, between 4,000 and 5,000 students will participate.

Literary Competition

(continued from page 1)

Honorable Mention awards in this category were given to Ruth Dreher, Johnson County Community College, for "Yellow Noon Dance"; Christopher Evans, Sinclair Community College, for "My Grandfather's Story"; and Don Climer, Dallas County Community College District, for "The Door."

In the essay category, the First Place award went to Paula M. Keenan, Kirkwood Community College, for an essay titled "Devereux"; the Second Place award went to Catherine Summers, Cuyahoga Community College, for "The South Garden"; and the Third Place award was given to Kim Vetsch, Kern Community College District, for her essay titled "Action at the Family Theatre!"

First Place in the poetry category was won by John Sanders, St. Louis Community College at Florissant Valley, for "Today's Special"; Second Place went to Barbara Campbell, Foothill-De Anza Community College District, for "Southern California Sestina"; and Third Place was given to David Rea, Seattle Community College District, for "Working Stiff Sonnet."

Three nationally-recognized writers judged the entries in their respective categories. The judge for the short story category was James McKinley, author of *Assassination in America* and *Acts of Love*. Kathleen Norris, author of *Dakota*, was the judge for the essay category. The poetry category was judged by Donald Hall, winner of the 1991 Robert Frost Silver Medal from the Poetry Society of America.

Moraine Valley Community College will prepare a literary publication of all winning entries and will distribute it to League colleges in the fall.

Johnson County Community College will host the 1995 competition.

Houston Conference Call for Presentations

The call for presentations has been issued for the League's annual computer conference to be held in Houston, Texas, November 13-16, 1994. The conference has become the principal showcase for the application of information technology to improve teaching and learning and institutional management in community colleges, attracting over 2,000 participants annually. Proposals are cordially invited from faculty and staff in all two-year colleges in the United States, Canada, and other interested countries.

The theme of the conference, "Making Connections. The Changing Ways We Teach, Learn, and Work in Community Colleges," focuses on how information technology is utilized by modern, comprehensive community college as it remodels itself to meet increasing and changing needs of its students, its communities, and the nation. Presentations are sought that describe applications of information technology for providing instruction, delivering student services, managing the organization, and providing access to programs and services for the diverse clientele of community colleges - in short, applications that help institutions do all of the things community colleges must do to assist in solving educational and economic problems.

(The last paragraph was illegible.)

JOSTENS LEARNING DEMONSTRATION CENTER PROJECT ANNOUNCED

A new League computer project was announced at the recent conference in Nashville involving Jostens Learning, a partner in "The Community College and the Computer" project. Jostens Learning, the largest educational software company in the world, naturally has a great deal of interest in the teaching and learning process, especially as it is conducted in adult learning environments. Jostens sees the new Demonstration Center Project as a way to join forces with the League in attacking one of the nation's greatest challenges—the high level of need for basic skills education of the adult population. The project, undertaken in conjunction with selected community colleges across the country, will include a major study of the uses of integrated learning systems in assisting adults to learn basic skills more efficiently.

The League for Innovation has agreed to conduct the study and to manage the project for the next two years. To get the project underway, Jostens Learning will establish demonstration centers strategically chosen so that colleges interested in integrated learning systems may conveniently observe an operating integrated learning system in a community college setting.

Recently, Jostens Learning created a National Community College Advisory Board of high profile leaders drawn from across the community college spectrum. These leaders, the company hopes, will assist the company in establishing and maintaining a solid connection with community colleges and in better understanding the purposes and needs of these institutions.

LEADERSHIP ABSTRACTS SOUGHT

Materials and articles for possible inclusion in *Leadership Abstracts* are being solicited for use during the coming year. Activities at League colleges have often been described in the series, and authors from League colleges have had their work published as a *Leadership Abstract*. The series is sent directly to over 12,500 presidents, senior administrators, and trustees who comprise the series' primary audience. Potential authors should choose topics of interest to these groups, and write in straightforward prose intended for individuals who can be assumed to have limited time and attention to give to any one publication.

When *Leadership Abstracts* was recently evaluated, the readers indicated their strong preference for practical advice on how to perform leadership tasks, solutions to common problems facing community college leaders, or descriptions of model programs that respond to a common challenge.

Abstracts are often organized to include a brief introduction, several major sections, and a strong conclusion.

Manuscripts are usually about 1,500 words in length, written in narrative prose using the third person. First and second person (I, we, and you), references or citations, long quotations, and the names of individuals should be avoided unless absolutely necessary to the abstract. It may be helpful to review previously published abstracts for examples of organization, style, and content—particularly those written by other practitioners.

Call or write the editor, Larry Johnson, at the League office to discuss the preparation or submission of a manuscript for *Leadership Abstracts*.